



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,425	09/25/2003	William E. Luce	BFGRP0318USA	5819
53428	7590	06/13/2008		
DON W. BULSON (GRCO)			EXAMINER	
RENNER, OTTO, BOISSELLE & SKLAR, LLP			NGUYEN, XUAN LAN T	
1621 EUCLID AVENUE				
19TH FLOOR			ART UNIT	
CLEVELAND, OH 44115			PAPER NUMBER	
			3683	
			MAIL DATE	
			DELIVERY MODE	
			06/13/2008	
			PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/671,425

**Applicant(s)**

LUCE, WILLIAM E.

**Examiner**

Lan Nguyen

**Art Unit**

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 March 2008.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-17, 21 and 22 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 2-17, 21 and 22 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 19 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SB/888)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. In view of the Appeal Brief filed on 3/21/08, PROSECUTION IS HEREBY REOPENED. New grounds of rejections are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/Robert A. Siconolfi/

Supervisory Patent Examiner, Art Unit 3683

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2-5, 10, 11, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Labrecque (USP 4,092,947) in view of Spiteri (USP 4,155,013).

Re: claim 2, Labrecque shows an aircraft shock strut, as in the present invention, comprising: a cylinder 40; a piston 43 telescopically movable within the cylinder and defining therein a sealed chamber partially filled with a liquid and partially filled with a gas. Labrecque shows a probe 14 to indicate the level of the liquid inside the cylinder. Labrecque lacks a cable connecting to the probe as claimed. Spiteri teaches a fiber optic cable 3 passing through a wall 6 connecting to a probe 4 for sensing a level of a liquid. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Labrecque's strut to comprise an optical liquid sensor as taught by Spiteri in order to provide accurate measurement of the liquid at the same time providing an automatic warning to an operator of the vehicle.

Re: claims 3 and 4, Spiteri shows the cable includes at least one optical fiber and the probe is an optical liquid sensing probe.

Re: claim 5, Spiteri further shows a fitting assembly 5a that seals the cable 3 with respect to the wall 6.

Re: claims 10 and 11, Spiteri further shows the probe and cable are assembled together as a unit, and wherein a guide tube 5 is mounted within the liquid chamber, the unit at least partially extending through and being located by the guide tube and would be able to be removed as a unitary piece.

Re: claims 21 and 22, the discussion of the rejection of claims 2 and 3 meets all the claimed limitations of claim 21. Furthermore, it is well known knowledge that the distal end of a fiber optic probe includes a retro-reflective prism.

4. Claims 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Labrecque (USP 4,092,947) in view of Robinson (USPub. 2002/0124643A1).

Re: claim 12, Labrecque shows an aircraft shock strut, as in the present invention, comprising: a cylinder 40; a piston 43 telescopically movable within the cylinder and defining therein a sealed chamber partially filled with a liquid and partially filled with a gas; and at least one probe 14 associated with the chamber for sensing a condition of a level of liquid in the chamber through interaction with the liquid in the chamber. Labrecque lacks the plurality of probes as claimed. Robinson teaches a liquid sensor with a plurality of probes 7 spaced apart along a longitudinal axis of a chamber 1 in order to provide multiple level measurements of the liquid levels. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Labrecque's strut to comprise the multiple probes of Robinson in order to provide multiple level measurements of the liquid levels: hence, would provide more accurate indication of the liquid levels.

Re: claim 13, the discussion of claim 12 meets all the claimed limitations of claim 13 wherein Robinson further shows the probes 7 to be liquid level sensing fiber optic probes.

Re: claim 14, the discussion of claim 12 meets all the claimed limitations of claim 14 wherein the at least one probe 7 includes two probes, a first one of which detects a condition of a first liquid level and a second one of which detects a condition of a second liquid level.

Re: claim 15, the discussion of claim 12 meets all the claimed limitations of claim 15 wherein Robinson further shows a processor 6 in communication with the probe for processing a signal from the probe related to the level of liquid in the chamber.

Re: claims 16 and 17, Robinson further shows the probe to be a level sensing optical probe, and further comprising a sensor unit 6 external to the chamber and connected by an optical cable 5 to the probe within the chamber, the sensor unit functioning to transmit light to the probe and receive reflected light from the probe via the optical cable, and wherein the sensing unit is connected to the processor 6.

### ***Double Patenting***

5. Claims 2-17, 21 and 22 of this application conflict with claims 1-17 of Application No. 11/458909. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either

Art Unit: 3683

cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

6. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

7. Claims 2-17, 21 and 22 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-17 of copending Application No. 11/458909. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

#### ***Allowable Subject Matter***

8. Claims 6-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. It is found that the structures of the fitting assembly as claimed in claims 6-9 have defined over the prior art of record.

***Conclusion***

10. Nakamura et al. and Monguzzi et al. are cited as well known fittings for optical sensors. However, these well known fittings do not meet all the claimed features of the fitting in claims 6-9 as being installed in the strut of the instant invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan Nguyen whose telephone number is (571) 272-7121. The examiner can normally be reached on Monday through Friday, 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Xuan Lan Nguyen/ 6-9-08  
Primary Examiner  
Art Unit 3683

